# **Pratyush Bindal**

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LinkedIn 
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# Education

# Birla Institute of Technology and Science, Pilani

Aug 2022 - July 2026

Bachelor of Engineering in Computer Science (CGPA: 9.54 / 10.00)

Hyderabad, Telangana

• Relevant Coursework: Data Structures and Algorithms, Database Systems, Object Oriented Programming, Operating Systems, Discrete Structures & Mathematics, Computer Architecture, Machine Learning

G. D. Goenka Public School

April 2018 - July 2022

High School (Class XII: 96.6% and Class X: 97.6%)

Muzaffarnagar, Uttar Pradesh

# Experience

## **Upcoming Software Engineering Intern**

May 2025 - July 2025

Microsoft

Hyderabad, Telangana May 2024 – July 2024

**Summer Research Intern** *Indian Institute of Remote Sensing (IIRS), Indian Space Research Organisation (ISRO)* 

Dehradun, Uttarakhand

 Led a team of four in developing advanced computer vision models implementing Transformer-based models such as Grounding DINO, and CNN-based models such as YOLO v8, v9 and v10 for detecting ships in the sea and automatic feature extraction of their images

# Undergraduate Teaching Assistant - PHY F111 (Mechanics, Oscillations and Waves)

Aug 2023 - Dec 2023

Birla Institute of Technology and Science, Pilani

Hyderabad, Telangana

• Prepared reading materials relevant to the course, helped in the smooth conduction of tests and solved doubts of students regarding allotted study materials

# Skills

Languages: C, C++, Java, Python, HTML, CSS, SQL, JavaScript, TypeScript, Prolog, Verilog HDL, Assembly

**Technologies**: TensorFlow, PyTorch, Spring Framework, React, SolidJS, Google Cloud Platform **Databases**: NoSQL, PostgreSQL & SQL-based databases like MongoDB, Supabase, Oracle MySQL

## **Projects**

#### **Reinforcement Learning In Cybersecurity** | PyTorch, Python and related libraries

- Implemented AE-SAC and Twin Delayed DDPG (TD3) Algorithms on the NSL-KDD Dataset for Intrusion Detection
- Established ML-based Intrusion Detection System on the NSL-KDD Dataset to map alert-attack relations
- Comparatively evaluated various ML-RL algorithms for Fraud & Anomaly Detection on MQTT & AWID3 datasets

#### **BITSBids** | React, Spring Framework, Mongo DB, Maven

- Developed ready-to-scale Full Stack Bidding Website exclusive to BITSians via Google OAuth2 Authorisation
- Applied Dynamic Price Updation, Multiple Bids Prioritisation, Anonymous Chat Client, and Filtered Product Search

# StarWars Databank | Typescript, SolidJS, Supabase, PL/pgSQL

- Contributed to a DataBank Website for storing, analysing, and categorising information about the StarWars world
- Created Frontend using SolidJS & used PostgreSQL in Supabase for developing backend database system

## Honours and Awards

- 100% Merit Scholarship Awardee (Awarded to Top 1% of the batch)
- 80% Merit-cum-Need Scholarship Awardee (Awarded to Top 3% of the batch)
- Among Top 255 students in IOQA 2020-21 organized by IAPT-HBCSE

## Volunteership and Extracurriculars

#### **Mathematics Mentor**

Sept 2023 - Dec 2023

Academic Counselling Cell

Hyderabad, Telangana

• Mentored 1000+ students undergoing Mathematics I course at the institute

#### Research, Editorial and Events Member

Oct 2022 - Sept 2023

Ad Astra - Astronomy and Science Club

Hyderabad, Telangana

Gained an insightful experience researching about recent advancements in Astronomy & Astrophysics